Happy Trails!

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# Animal Tracks of the Redwood Region

Exploring the Secret Lives of Animals

By Kim A. Cabrera

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## The Secret Lives of Animals

Most of the time an animal spends in the woods goes unnoticed by humans. Deer lay quietly in the brush along trails and watch passing hikers. Raccoons, skunks, foxes, opossums, coyotes, and even bears, sometimes prowl the streets of cities and suburbs at night, unseen by people. Los Angeles alone has 3000 coyotes living within the city limits. These cunning animals survive by hunting small mammals and living off the garbage left by humans. Yet, many of the city's residents never see these animals.

The day-to-day drama of hunter and hunted is played out far from the watchful eyes of mankind. How then can we know what these animals do? For those of us curious enough about animals to spend the time learning it, tracking is an art that can open the door to an understanding of the secret lives of animals.

## Modern Day Tracking

When most of us think of tracking, we think of the Indian scouts in the old western movies. Few people are aware that tracking didn't die out when the wild west was tamed.

Tracking is increasingly being used today by many search and rescue agencies. Ground search teams trained in tracking have been successful at finding hunters and hikers who have gotten lost in the woods. Ranchers use tracking skills to find lost livestock. Until several decades ago, tracking was regularly used by the U.S. Border Patrol to catch people who had illegally crossed the international border. Law enforcement agencies use trackers to analyze crime scenes. Hunters follow tracks and signs to their quarry.

Trackers are trained to see things written on the ground that other people don't see. Tracking training will enable you to read the secret tales written in the dirt. Everything that moves over the ground leaves tracks or signs of its passage. The difference between a tracker and a non-tracker is that the tracker is aware of, and looks for, those signs.

## Why learn about tracks?

Many animals here in the redwood region are nocturnal, which means they are active at night. For this reason, you may never see many of the creatures that live here. You can, however, find their tracks. By identifying the prints you find, you will get an idea of the diversity of animal life that exists here. To an outdoor enthusiast, the most beneficial aspect of tracking is being able to find your way back if you become turned around in the woods. One of the most exciting things about learning the art of tracking is that you'll never lack for something to do. The stories written on the ground change every day. Every time you go tracking, you will find fascinating new tales to read. The ground is an open book to those who know how to read it and unlock its secrets. Tracking can increase your skills in nature observation and will enhance any hike or trip outdoors. You may find yourself staring at the ground wherever you go, looking for signs of previous visitors. Animals live in many different environments, including cities and suburbs. Once you learn to identify common prints, you may be surprised at some of the places you find them. Read on to learn how you can enter this fascinating world.

## The Basics

Tracks, by their very nature, exist only for a short time. Gravity and wind wear them down into flat ground very quickly, depending upon what type of soil the print is in. Prints in loose, dry sand are erased faster than those in soft mud. If the mud dries and hardens, the tracks may remain for a long time. Tracks in snow last only until the snow melts. With practice, you will get a feel for what the best soil types are for finding good tracks.

One important thing to remember when following tracks is to keep the print between you and the sun. This way, the light casts shadows in the print and makes it stand out from the surrounding soil. You can use a mirror to reflect light into a track so you can see its details better. A flashlight also works well in low light conditions.



## Following trails

One useful aid to help you follow a difficult trail is a tracking stick. This is simply a stick about three feet long on which you have marked the measurement of the animal's stride. Stride is the distance from the heel of one print to the heel of the next. You can also mark the measurement of the print itself to be sure you're following the right trail. You may want to use rubber bands as markers since they are easy to move. Or, you can carve a notch in the stick to mark the measurement. An old ski pole makes a good tracking stick, but in a pinch, you can usually find branches lying on the ground. To use the tracking stick, hold it at the point where the stride measurement is marked. Hold this over the heel of the last identifiable print. Now, sweep the point in an arc and look where it points for evidence of a track. Sometimes, you may have to look for very subtle clues, such as broken pine needles, bruised blades of grass, or overturned pebbles. Look closely and you will see it.

Tracking stick with stride and foot measurements marked with O-rings. Useful for finding the next track.

## Other signs

Animals leave signs of their passage in addition to tracks. These include chewed or bruised vegetation, droppings, scratches in tree bark, hairs snagged on branches or in bark, rubbings on trees, gnawed bones, feathers, opened nuts, dens, burrows, and nests. You may also find well-worn trails and runways through the grass that many animals use regularly. These signs may not be obvious at first, but with practice, you will be able to see them.

## Where to find tracks

When you're first beginning to learn tracking, the best place to start looking is in soft mud or wet sand near water. These soils hold tracks well and often yield clearly identifiable prints. This is the best way to learn what tracks look like in the field. As you gain skill, you will learn to identify tracks in other soil types. You will also learn to identify tracks that show just portions of prints rather than whole tracks.

## Seeing animals

When most of us visit a natural area, we want to see animals. Unfortunately, many of them are only active at night. Some, like deer, come out at dusk. You can increase your chances of seeing these animals by going out a few hours before dusk to an area where you've found tracks. Sit quietly in a place where you can see the area and wait. You may be rewarded with the sight of a herd of deer or another animal.

## How to use this guide

This guide has several sections. The first contains drawings of common tracks and information on the habits of the animal. Use this section to identify any perfect tracks you find. A perfect track is one that shows all details. The next section has drawings of the overall shapes of the tracks. When you find an unidentifiable impression, use this section to help you identify the animal based on overall shape of the impressions. The last section shows common trail patterns. Use this section along with the overall shapes section to help identify the trail.

Measurements of each print are indicated next to the drawing. All measurements are averages.



## Black Bear

Front foot

4½" L x 3¾" W

Round front heel pad doesn't always show in tracks.

Hind foot

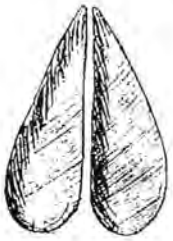
7" L x 3½" W

Trail width: 14"
Stride length: 18"

Trail Pattern

Black bears are the smallest American bears, and the most common. They are the only bears found in the wild in California. Although the grizzly bear is the state mammal, it has been extinct in California since 1922. Black bears are usually nocturnal, but can be active during the day. Bears are strong, agile, and quick. They swim and climb trees well. A bear can run 30 miles per hour in short bursts. Bears eat a wide variety of foods. A partial list includes: grass, leaves, nuts, berries, buds, twigs, roots, corn, fruits, insects, plant sprouts, invertebrates, fish, carrion, fruit, succulent plants, eggs, birds, small mammals, and human garbage. Bears will dig up underground wasp nests to eat the insects, nest and all. They are extremely hungry when they emerge from their winter dormancy period in the spring and will often strip the bark off trees to eat the sugary cambium layer. The bears in the region do not hibernate all winter, but they do sleep away the harshest part of winter. Bears den in logs, beneath fallen trees, and in caves. Several days before entering the den, a bear consumes roughage, including leaves and bits of its own hair. These form a plug up to a foot long in the digestive system that is voided after the bear emerges from the den. One or two young are born during the winter, usually in January or February. They weigh ½ pound at birth and grow quickly by nursing on the mother's milk, which can contain as much as 20% fat. Bear droppings are over an inch thick, and tubular. The scat varies with diet, which can be 90% vegetable matter. Bears are shy animals and will usually run from humans. They sometimes raid human garbage, compost piles, or pet food dishes that are left outside. The inner toe in the track is the smallest toe. Bears walk plantigrade or flat-footed. Bears use the same trails over and over for generations. They tend to place their feet in exactly the same place every time they use the trail. You can find these trails where each footfall is in a depression worn into the ground by the passage of so many bears over the years.

## Black-tailed Deer



3½" L x 2½" W

Trail width: 6"
Stride length: 21"-24"

Toes spread when in soft mud or when the animal is running. Dewclaws show.

Trail Pattern

Deer are common in the region. The deer here are a subspecies of mule deer known as black-tailed deer. They come out around dusk and dawn to feed in the edge areas, the transitions between forest and field. They may be active at mid-day as well. Deer are also commonly seen feeding in fruit orchards. Their heart-shaped prints are easy to identify and common in many areas. The pointed end of the print indicates the direction of travel. Deer scat is an oval pellet. The pellets are easy to recognize by the dimple on one end and the point on the other end. Their large ears, from which mule deer get their name, can move independently. When the young are born, they have spots and lack scent. This enables them to hide from predators. They spend a lot of time curled up on the forest floor, sleeping. The spots provide camouflage. The lack of scent means predators can't smell them. Fawns can walk when they are only a few hours old.

Because deer walk in a diagonal walk pattern (see page 34), you can tell whether the track maker was a buck or a doe. Males tend to have wider shoulders, so the hind tracks (the ones on top) will fall to the inside of the line of travel. The doe's wider hips will cause the hind tracks to fall to the outside of the line of travel. This is true only when they are walking and only for diagonal walkers.

Bucks have antlers which are shed once a year. The antlers of black-tailed deer (and mule deer) are forked. They don't branch from one main beam like those of the white-tailed deer do.



## Black-tailed Jackrabbit

Hind foot

2 5/8" L x 2" W

Front foot

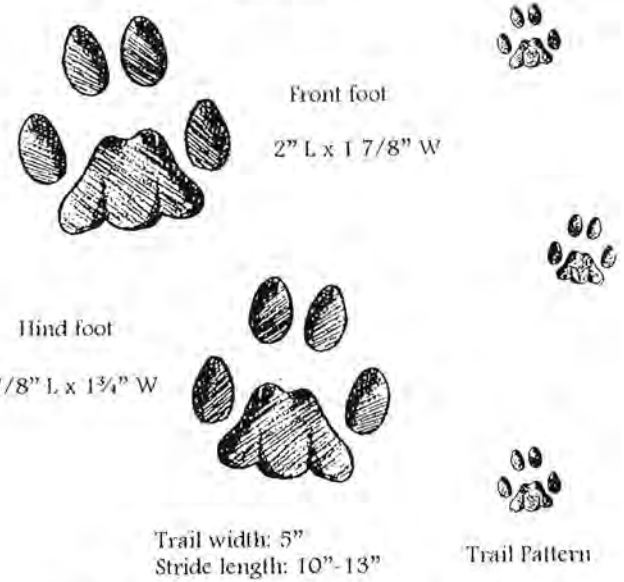
1½" L x 1 1/8" W

Trail width: 7½"
Stride length: 9"-12"

Trail Pattern

The black-tailed jackrabbit is the most widespread jackrabbit. It lives on river bars, in meadows, barren areas, and sand dunes. The jackrabbit is a hare, which means its young are born with fur and with their eyes open. They are most active in the late afternoon, preferring to spend the day resting in a form, a shallow depression the size of its body that the animal scoops out of the dirt. Jackrabbits eat grasses and leafy vegetation in the summer. In winter, they feed on woody or dried vegetation. Sometimes these social animals will feed in groups. Jackrabbits have excellent hearing. Their ears can be 5 inches long. In addition to collecting sound, the large ears serve to disperse some of the animal's body heat on hot days. Jackrabbits can weigh three to six pounds. Although they are larger than cottontails, the hind tracks may appear smaller because jackrabbits tend to run on the toes of the hind feet. The long heels do not leave marks when the animal is running like this. The hind feet can be 5¾ inches long. Jackrabbits rarely walk. They hop five to ten feet at a time. At top speed, the animal can leap 20 feet or more. They can run 30 to 35 miles per hour over a short distance. When running, the animal jumps exceptionally high every few leaps to get a look around. The white underside of the tail is flashed when escaping from a predator. This may confuse the predator or warn other jackrabbits of danger. Jackrabbits will also thump the ground with their big hind feet to signal danger. Scat is a spherical pellet about ½ inch in diameter. The home range of a jackrabbit is about ten acres. Jackrabbit young are born in a deep form lined with soft materials, including fur from the mother's chest. These animals are prolific, with one to four litters of up to eight young born each year. Sometimes the mother will place the young in separate forms to decrease the chances that a predator will find them all. She stays away from them during the daytime and returns several times a night to nurse the young. This is a way of avoiding attracting the attention of a predator. The young can take care of themselves in one month. Common predators include foxes, owls, hawks, snakes, and coyotes. Tracks in mud sometimes show the hair on the bottom of the feet. In sand, the trail pattern, stride length, and the size of the imprints are the best indicators of jackrabbit tracks.

## Bobcat




Bobcat tracks show four toes on the front foot and four toes on the hind foot. Cats do not show their claws in their tracks because they are retractable. Cats, unlike dogs, keep their claws sharp by not walking on them.

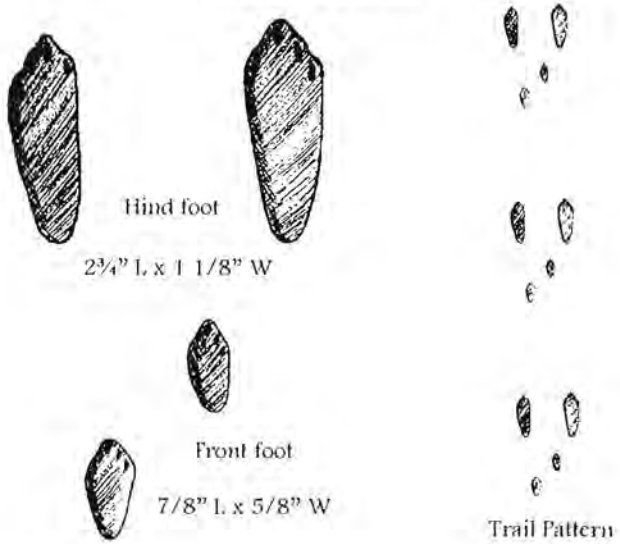
Bobcats are active any time. They are seen in the daytime, but do a lot of hunting at night. They hunt small mammals, such as mice and squirrels, but can take an animal as large as a deer. Bobcats are shy animals and are not often seen by humans. They can range up to 50 miles a day while hunting, but usually hunt within an area of four to five square miles. They hunt from the ground, but will pounce on prey from trees.

Bobcat young are born in April or May. The average is three kittens per litter. They are born blind and stay with their mother until fall.

Bobcat scat is in segments and usually contains the hair and bones of its prey.
Bobcats get up to about 30 pounds. They have short tails (six to seven inches long), while mountain lions have long ones. The end of the tail is black, tipped with white.

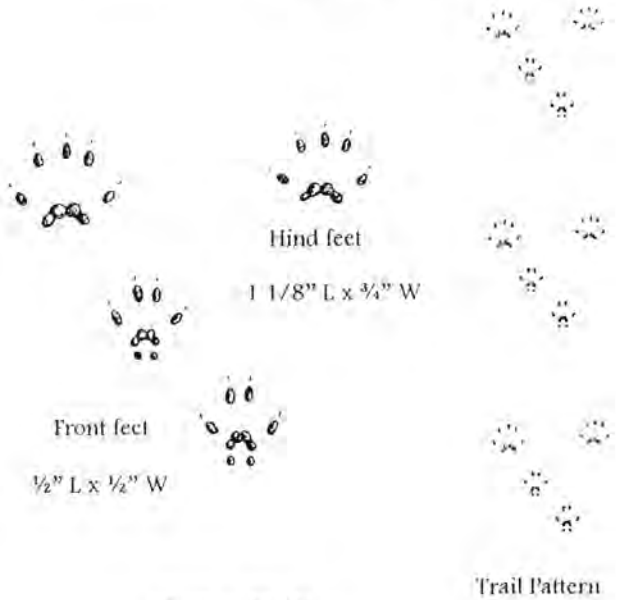


## Brush Rabbit




Brush rabbits are cottontails, rabbits with white cottony tails. They are found in brushy areas. They are active dusk and dawn, but are primarily nocturnal. Sometimes, the young are active in the daytime. Brush rabbits do not dig burrows like European rabbits do. When escaping from predators, they will retreat into dense brush. They hide by day in brush piles and grassy depressions, resting in forms of their own construction. Brush rabbits are small, weighing only two to four pounds. Like all rabbits, they are prolific. They can have five litters of up to seven young per year. The young are born with their eyes closed and lack fur. The mother hides them in a nest, which she covers with a blanket of grass before she leaves to feed. The babies are mature in four or five months. They eat woody vegetation in the winter, including bark, twigs, buds, Douglas fir, and salal. During the summer, the diet is more varied. They eat grasses, berries, plantain, clover, and other plants. Scat is a round pellet, ¼ to 1/3 inch in diameter. Common predators include foxes, coyotes, gopher snakes, and bobcats. Tracks are often indistinct due to the hair on the bottom of the feet. Tracks are in groups of four prints, with the cluster usually measuring six to nine inches long.

## Townsend's Chipmunk



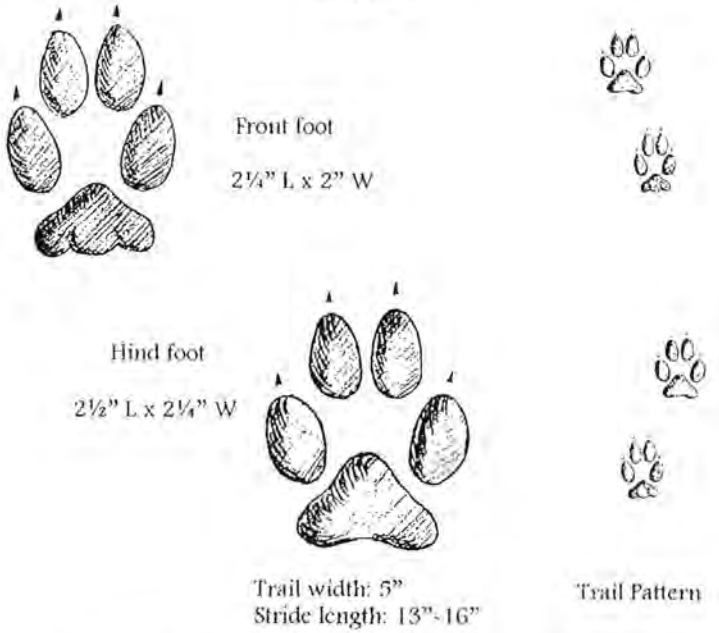

The closely related species of Townsend's chipmunk that inhabits northern California is the yellow-cheeked chipmunk. Chipmunks have stripes on the back and cheeks.

Chipmunks are relatively shy. They are active all day and often sun themselves in trees. They are good climbers, often running up trees to flee predators. The home range is about 1½ acres. Chipmunks eat berries, acorns, maple seeds, conifer seeds, fungi, and insects. Common predators include the bobcat, gray fox, weasel, and mink. Some of the chipmunks in campgrounds become bold and will raid picnic tables and carry off food after stuffing it into their cheek pouches. In winter, they will hole up with a food cache, but they don't hibernate.

Tracks are typical rodent tracks showing four toes on the front feet and five on the rear.



## Coyote




Coyotes are very intelligent animals that have been able to adapt to many different environments. Some live in major cities such as Los Angeles, feeding off human garbage and hunting mice and rats. In fact, the city of Los Angeles is home to about 3000 coyotes who roam the streets at night. They have adapted so well to the urban environment, that few people even know the coyotes are there.

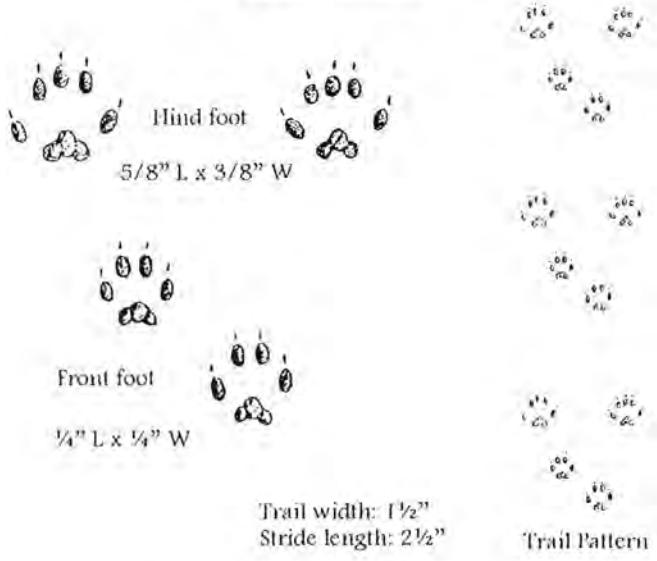
Their tracks average 2½ inches long. The hind print is smaller than the front one. The inner two toes are smaller than the outer two. Coyotes have great stamina. They are good runners and swimmers.

They can eat a wide variety of foods, such as small mammals, eggs, fruit, berries, nuts, rodents, fish, carrion, insects, grains, vegetation, and even human garbage.

Dens are usually located in hollow trees, stumps, rock piles, or in brush. A coyote digs its own den, but will sometimes enlarge the burrow of another animal.

Young coyotes, usually three to nine pups per litter, are born in a den or shallow burrow in April or May. After they are about ten weeks old, the pups begin hunting together. By fall, they can survive on their own. Coyotes hunt both night and day.

## Deer Mouse

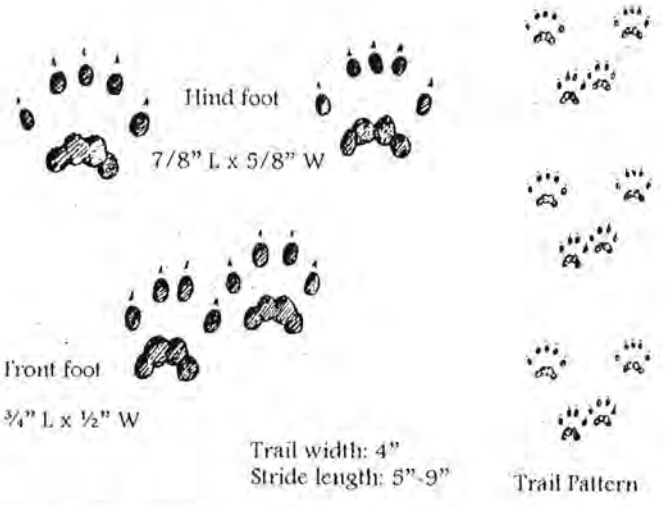



Deer mice are common nocturnal mammals. Adults are brownish gray. Juveniles are gray. Both have dark eyes and white feet and undersides. They have four toes on the forefeet and five toes on the hind feet. Their tracks are commonly found on the fine beach sand of river bars and in soft mud. Tracks are usually in groups of four with a trail width less than two inches. In firm sand, sometimes a whole print will show up clearly. Mice make nests lined with the softest materials they can find. Nests are located beneath rocks and logs, in burrows, or in trees. Three or four litters of four babies each may be born per year.

Mice will also gnaw on old bones and antlers to get the calcium. When you find a bone, look very closely at it and you may see tiny paired tooth marks where mice have scraped it. Mice eat seeds, mushrooms, fungi, berries, herbs, insects, larvae, and carrion. They are good climbers and will climb to escape danger. They are active year-round.



## Douglas' Squirrel



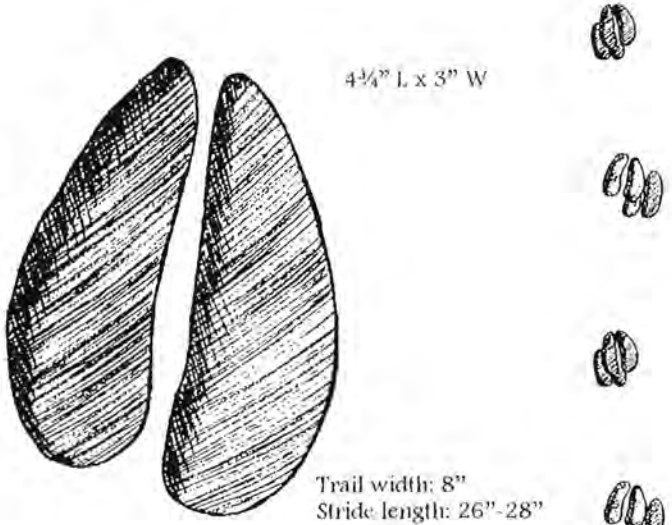

Douglas' squirrels are active during the day. They have rust red coats and white rings around the eyes. The underside is orange. Long, curved toenails act as hooks to help the animals climb. Douglas' squirrels build their nests high in trees. In summer, they build a nest out of lichens, mosses, twigs, and bark. In winter, their nests are located in holes in trees. They also live in ground burrows and sometimes move into and cap abandoned bird nests with sticks and leaves.

These squirrels are fairly noisy and will scold and chatter at people from their perches. Their tracks show four toes on the front foot and five toes on the hind foot. The young, usually a litter of four to six, are born in May or June. A family group may stay together for almost a year. Douglas' squirrels are also called pine squirrels or chickarees.

They eat green vegetation, new shoots of conifers, acorns, nuts, mushrooms, insects, fruits, and berries. They are fond of cones and will drop them to the ground and gather them up later for winter storage. They establish favorite feeding stations in the trees. They eat the seeds, which they get to by stripping the cones. Cone scales mound up on the ground below feeding stations in piles called middens. The squirrels also stash mushrooms in the forks of tree branches for later use. Douglas' squirrels open acorns by gnawing on the shells. You may find piles of these opened nuts beneath a tree where the squirrel has been working.

Common predators include bobcats, foxes, house cats, and owls. Humans raid the cone caches for seeds to be used in planting nursery trees.

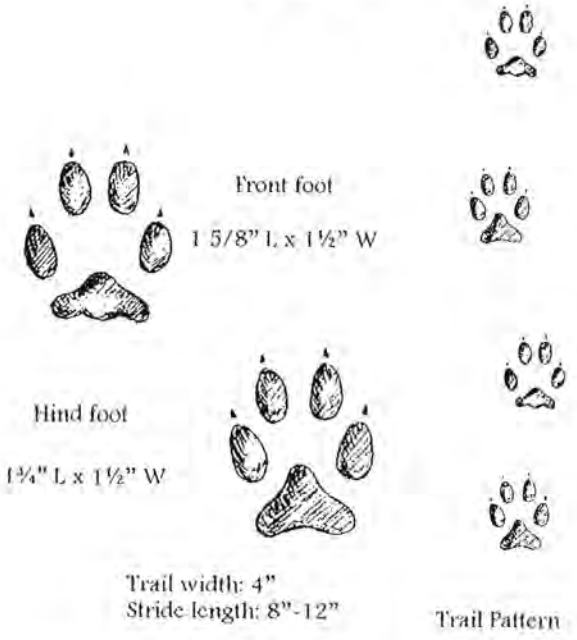
# Elk




The elk is also known as the wapiti, a Shawnee word meaning "white deer." When they first saw elk, the early settlers thought the animals were moose, so they called them "elk" which is a British word for moose. Both bull and cow elk have a distinctive light-colored rump patch. Bulls can stand as tall as five feet at the shoulders. Elk tracks are longer and more robust than those of deer. Scat is similar to deer scat, but much larger. It can be ¾ inch long. Elk also leave distinctive wallows where they dig into the ground with their hooves and antlers and wallow in the dirt. During rutting season, elk will tear apart shrubs and saplings with their antlers. They also rub their antlers on small trees to remove the velvet. The antlers branch off from a main beam that can be up to five feet long. An adult bull can weigh over 1000 pounds. They feed on plants, leaves, bark, grasses, grains, and also eat lichen. In winter, they eat buds, bark, and twigs. Despite their large size, bulls can run 35 miles per hour. Both bulls and cows are good swimmers. Elk are active at dusk and dawn and are frequently seen feeding in prairies during the day. Elk can also be nocturnal. They inhabit woods and pastures. The rutting season occurs from August until November. During this time, the bulls join the cows in a herd. They are the most polygamous member of the deer family in America. A bull can collect a harem of up to 60 cows. In the fall, rutting bulls bugle or whistle as a challenge to other bulls. The whistle can carry for long distances. Cows will leave the herd for about a week to bear their calves. They can have one or two calves, which weigh up to 40 pounds each. Calves can walk almost immediately after birth. Mountain lions and bears prey on the calves. At one time, "elk's teeth," the two upper canine teeth, were valued as watch fob charms. An elk will mark territory by stripping the bark from saplings and rubbing the tree with its chin.



# Gray Fox



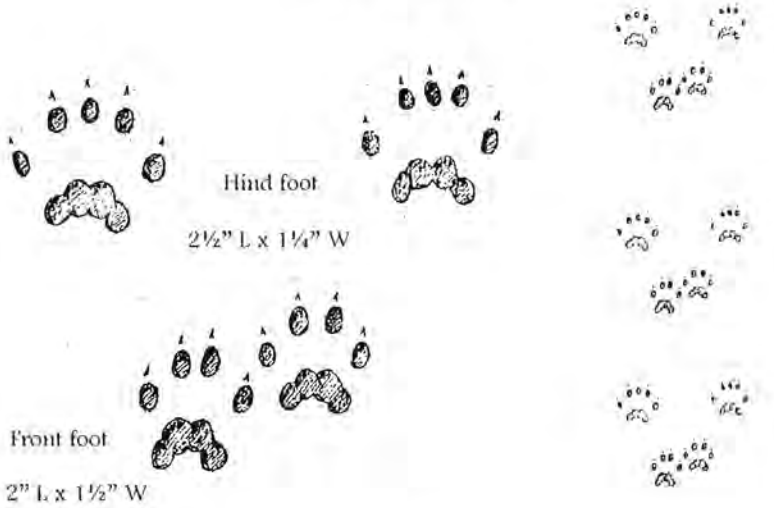

Gray fox tracks show four toes and claws. Sometimes, the semi-retractable claws do not show. Their tracks average less than two inches in length. Tracks commonly run in straight lines, one print in front of the other. Front and hind prints overlap each other and appear as one print. This is known as direct register. Only foxes and members of the cat family walk in this manner. In fine mud, the hair on the foot may be visible in the track.

Gray foxes are primarily nocturnal and hunt small mammals. Sometimes, they hunt by day. They are the only canines that can climb trees. They seek refuge in trees and also climb to find food. The bark of the gray fox sounds like a hoarse cough. If you startle a fox, it may bark at you.

Foxes are omnivorous. They eat small mammals, birds, insects, eggs, fruit, nuts, grains, and even human garbage. Rabbits are a preferred prey animal. In campgrounds, you might see them at night, picking through fire rings in search of morsels from campers' meals. They are frequently seen crossing roads at night. In towns, they often eat pet food.

Foxes den in rock piles or hollow logs. About five young are born in spring. Both parents care for the young and teach them how to hunt.

# Gray Squirrel




Sometimes the long heel mark shows in the hind prints. They can be up to 2½" long.

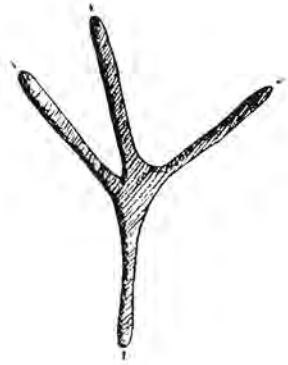
Trail Pattern

Trail width: 5"
Stride length: 10"-15"

Gray squirrels are common in the region. They have large bushy tails and gray fur. Since they love to eat acorns, they are found commonly in areas where oaks grow. They also eat nuts, berries, fungi, larvae, vegetation, and insects. The call is a hoarse bark. They make their bulky nests high up in trees from leaves, sticks, and bark. In winter, they find shelter in tree hollows. Gray squirrels do not hibernate. They are active year-round. Usually, four to six young are born per litter. Their tracks show four toes on the front foot and five on the hind foot. Clear tracks may sometimes be found along river edges, where the animals come down to drink. Gray squirrels are not as common in campgrounds as Douglas' squirrels and chipmunks.



# Great Blue Heron



6½" L

Trail Pattern

This large bird stands four feet tall and has a seven foot wingspan. It is the largest heron in North America. Its body is blue-gray and its head is white with black plumes projecting to the rear. It has a yellow bill. The tracks are six to eight inches long. They show three toes facing forward and one back. Herons live in fresh or salt water, wherever fish are plentiful.

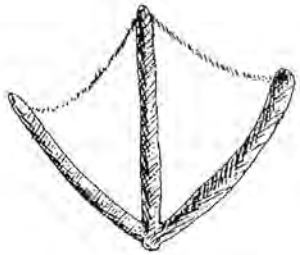
They are found in wetland areas, so you will see them along the banks of local rivers. They eat fish, snakes, insects, mice, and frogs. They hunt by walking slowly through shallow water and striking at prey. They use the long, dagger-like bill to spear fish. You may see them standing motionless in the water with the head and neck folded back, waiting for prey. Herons will squawk when alarmed or startled.

Herons have special feathers that break up into powder. These are used as a sort of powder puff to clean their feathers. The powder is rubbed into the feathers and combed out using the comb-like claw located on the middle toe of each foot.

Tracks show three toes facing forward and one facing back. The large hind toe enables them to stand on one leg for long periods of time.

They nest in colonies in wetlands where vegetation provides safety for the nesting site. Nests are three feet across and built in trees. They are maintained year after year. Herons will make 30-mile round trips to feeding areas.

## Common Merganser



2" L

Trail Pattern

These birds prefer fresh water and are seldom found near salt water. The male has a dark green head that appears almost black. The female has a crest on her head and a white throat. Both have a thin, red, hooked bill with sharp teeth along the edges. These teeth help them catch their swimming prey. The teeth also help them keep a grip on slippery fish. Mergansers dive underwater to catch fish, their preferred prey. They can swim well and quickly pursue prey underwater. Mergansers also eat aquatic insects. The call is a low, short quack. They build their nests on the ground or in crevices of trees. Mergansers are commonly seen flying along the river canyons. They sometimes skim low over the water, usually in pairs. White wing patches are visible when they are in flight. Mergansers prefer open water. The webbing on their feet sometimes shows in the tracks.



## Mountain Lion

Front foot

3¼" L x 3½" W

Hind foot

3" L x 3¼" W

Trail width: 8"
Stride length: 14"-17"

Trail Pattern

Mountain lions are also called cougars, panthers, catamounts, or pumas. They are the largest cats in North America. These solitary animals avoid people if they can. Their primary prey is deer, but they do eat porcupines, raccoons, birds, small mammals, foxes, mice, and grass. The lion is a magnificent animal which was hunted to near extinction and is now making a comeback. A single male lion may require up to 175 square miles of territory for its home range. They prefer wild areas frequented by deer. One lion will consume about one deer per week. A lion will cover the remains of its prey and return to the kill to feed until the meat begins to turn. An adult can weigh up to 200 pounds. Young mountain lions have spots and a ringed tail, and thus are sometimes mistaken for bobcats. (The bobcat has a short tail, while the lion has a long tail.) A litter of one to six young are born between late winter and mid-summer. The cubs stay with their mother for one or two years. Lion tracks show four toes on the front foot and four toes on the hind foot. The retractable claws do not show in the prints. Lion tracks can be over four inches long. They are good climbers and can leap more than 20 feet up into a tree from a standstill. They can jump to the ground from as high as 60 feet up a tree. A single male lion may travel 25 miles a night when hunting. Lions may be active by day in areas far from humans. They are most active at dawn and dusk, the times when deer are out feeding.

## Opossum

Front foot

1 7/8" L x 2" W

Hind foot

2½" L x 2½" W

Trail width: 6"
Stride length: 7"-10"

Trail Pattern

Opossums are the only North American marsupials. A marsupial is an animal with a pouch, like a kangaroo. Opossums have pointed noses and naked tails. They are the only North American mammals with prehensile (grasping) tails. The tail is used to assist in climbing. It also stores extra fat reserves, enabling the animal to survive lean times. Opossums have opposable thumbs on their hind feet which help them to grip branches and climb. They are the only non-primates with opposable thumbs. When baby opossums are born, each one weighs 1/200 of an ounce, is less than ½ inch long, and lacks fully developed hind limbs. Up to 14 young are born after only 12 to 13 days of gestation. Of these 14 young, only about nine survive. The entire litter could fit into a teaspoon. They climb into the mother's pouch, where they remain for about ten weeks. When they are big enough, they ride around on their mother's back. When attacked, an opossum can play dead, or "play possum." When using this defensive strategy, they drool and emit an unpleasant smell which discourages predators. They also climb to escape danger. When threatened, they will hiss and show their 50 sharp teeth. They nest in abandoned burrows or fallen trees. Opossums eat a variety of foods and are able to adapt to many different environments, from cities to wilderness. Their tracks show five toes on the front foot and five toes on the rear, including the opposable thumb. The thumb lacks a claw.



## Porcupine

Front foot

1¾" L x 1¾" W

Hind foot

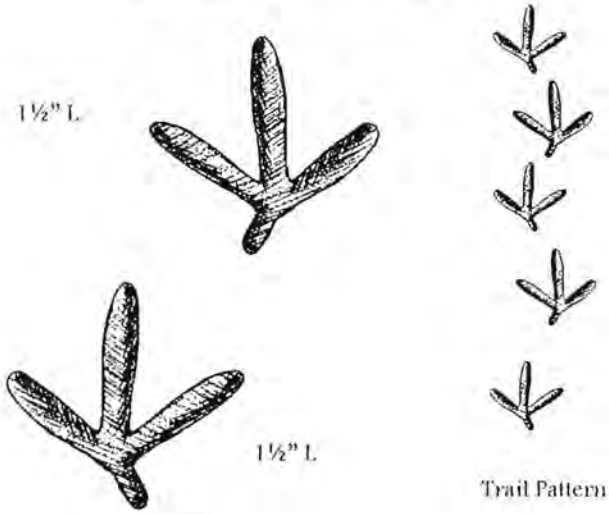
2¼" L x 1½" W

Trail width: 8"
Stride length: 6"-10"

Trail Pattern showing tail drag marks

Porcupines are nocturnal vegetarians, but can be active by day. They eat the inner bark, or cambium, of trees. They will also eat foliage, twigs, bark, leaves, buds, fruits, berries, nuts, flowers, and will sometimes feed in fields. They move slowly and don't see well. They climb trees to escape predators, but will use their quills if they have to. Porcupines do not shoot their quills. The quills are loosely attached. If attacked, a porcupine slaps the attacker with its tail. Many dogs have ended up with a muzzle full of quills by getting too close to a porcupine. The quills have barbs and will work their way in deeper if left alone. A single porcupine may have 30,000 quills. Quills are modified hairs that have hollow shafts with solid tips and bases. The quills can be up to five inches long. Newborn porcupines weigh more than grizzly bear cubs do at birth. Their tracks show four toes on the front foot and five on the hind foot. Marks made by the long claws usually show. The heel pads have a pebbly texture. This acts as a non-slip surface and helps them climb trees. Sometimes, a tail drag mark is visible in the trail. Porcupine scat is in pellet form, and often found in piles at the base of a tree where the animal has been feeding. Fishers are predators that can eat porcupines. They flip the porcupine over to get at the soft underside, which lacks quills. Porcupines love salt and will chew on wooden tool handles that have absorbed perspiration to get the salt.

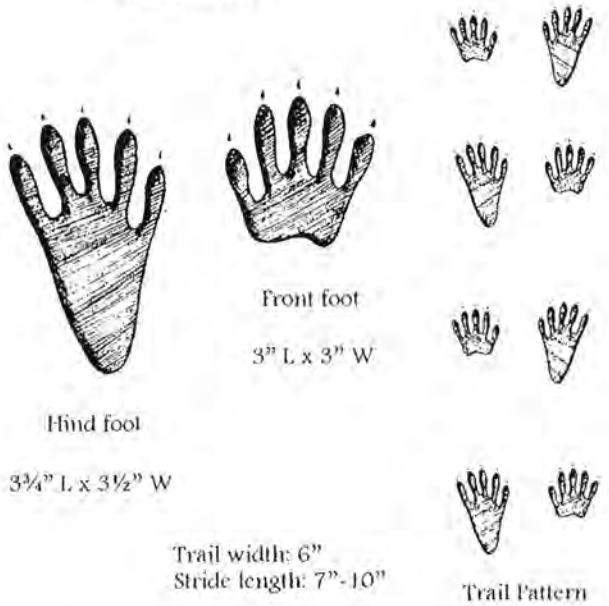
## California Valley Quail




This is the state bird of California. Quail spend most of their time foraging on the ground, therefore their tracks are found in a line, one after the other. Both male and female have a teardrop-shaped tuft of dark feathers on top of the head, although the female is not as boldly colored as the male. After the breeding season, quail live together in groups called coveys. These groups of up to 200 birds are composed of parents and young. Parents closely watch their young. While the group is feeding, one bird will act as a sentinel to warn the group of any approaching danger. If you're hiking along and startle a covey of quail, they will all burst into flight at once with a roaring of wings. These small, plump birds roost in trees for safety. They can be found inhabiting parks and woodland edges. Quail tracks are frequently found on sandy river bars. Their calls can be heard in the summer. The call, which sounds like "Chi-ca-go," is often given from a low perch.

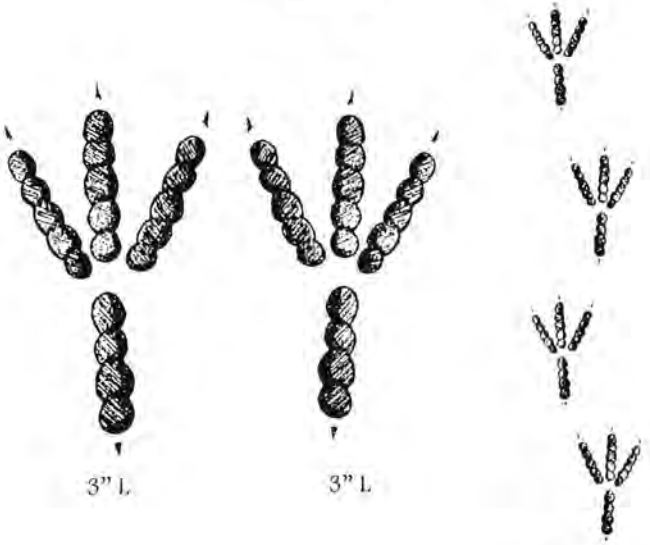


## Raccoon




Raccoons are familiar animals with masked faces and ringed tails. They have five toes on both the front and hind feet. Their long, dextrous fingers enable them to open latches, untie knots, turn doorknobs, and open jars. Their prints look like tiny human baby handprints and footprints. They are primarily nocturnal and thrive in many cities as well as wilderness areas. In fact, the densest population of raccoons in New York is in New York City. They are very intelligent and adaptable animals. They are omnivorous and eat a variety of foods, including frogs, fish, amphibians, shellfish, insects, birds, eggs, mice, carrion, berries, nuts, vegetation, salamanders, insects, berries, corn, cat food, and human garbage. Their tracks are commonly found near water. It is widely believed that raccoons always "wash" their food. This is not true. They exhibit a behavior called "dabbling" in which they dunk their food in water. This helps enhance their sense of touch and helps them find food underwater by feeling with their sensitive fingers. It also enables them to sort out items that are not edible. During cold weather, raccoons will sleep for several days, but do not hibernate. Raccoon scat is tubular and blunt on the ends. Scat may contain parasites that can get into human lungs, so handling it is not advisable. Three to six young are born in a hollow tree den in April or May. Their eyes open at three weeks. They remain in the den for two months. Young stay with the mother until the following spring. Raccoons are well known for their curiosity and mischievousness.

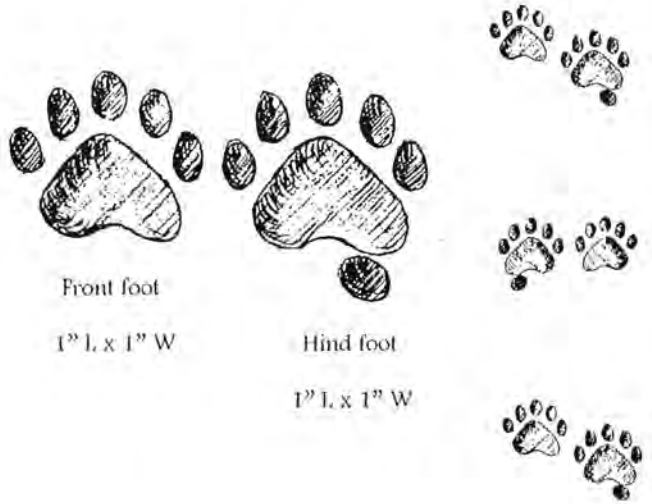
## Raven




Ravens are corvids, relatives of crows. They are black and have large, heavy bills. These large birds are commonly heard calling in the redwood forest. Some of their calls sound like screams. Other calls sound like deep croaks or hollow knocking sounds. This is the largest perching bird. They can be identified in flight by the wedge-shaped tail. These intelligent birds will raid food left on camp tables, and usually eat whatever they can find. They will eat carrion, insects, small animals, and fish. They have been known to feed at garbage dumps. Their tracks resemble very large Steller's jay tracks, often up to four inches long. They show three toes facing forward and one toe facing backward. In loose sand, there is often a long drag mark left by the middle toe. Like other ground-dwelling birds, their prints are one after the other in a straight line. (Birds that are primarily tree-dwellers leave paired prints.) Ravens will chase red-tailed hawks.



## Ringtail




The ringtail is commonly called the ringtail cat, but it is not a cat. It has also been called "miner's cat," "coon cat," "cacomistle," or "civet cat." Ringtails are related to raccoons. This nocturnal animal is very secretive and seldom seen. It has a fox-like face and a ringed tail like a raccoon. The ringtail's tail is longer than that of the raccoon. It has large eyes that help it see well at night.

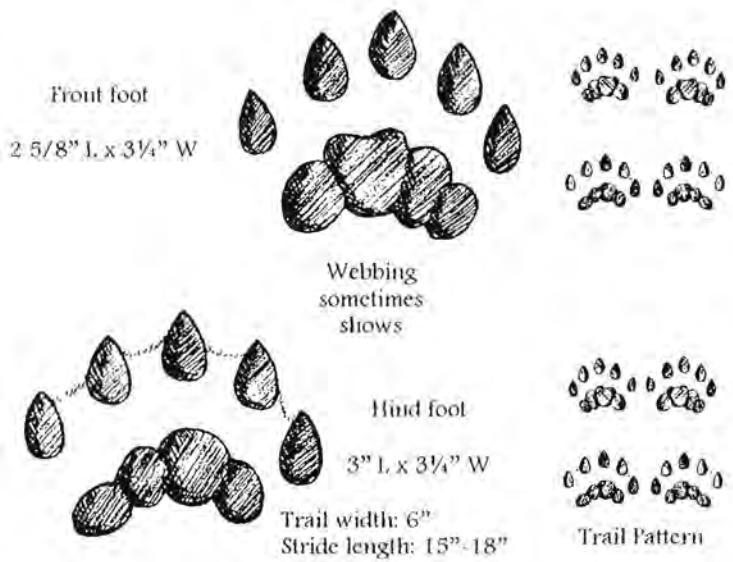
Ringtails are very agile and have sharp claws which enable them to climb trees and even scale walls.

They hunt by night, pouncing on their prey from ambush. The ringtail primarily eats small rodents, but will also consume fruit, berries, small animals, bats, birds, insects, and acorns. Ringtails spend the day in a den which is often lined with soft moss, leaves, or grass.

Young, usually two to four per litter, are born in May or June. Their eyes do not open for 30 days. Parents bring them food in the nest.

Tracks show five toes on the front foot and five toes on the hind foot. Claws do not usually show in the tracks.

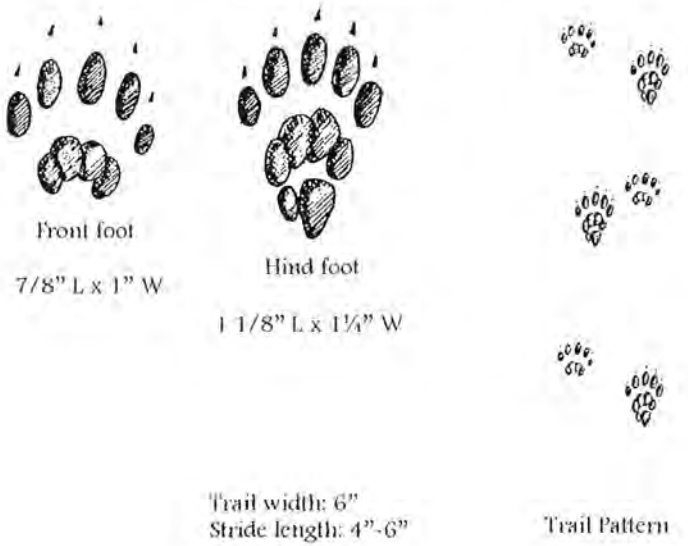
## River Otter




River otters are playful members of the weasel family who love to frolic in the water. They are common in local rivers and are a joy to watch. Otters can remain submerged for several minutes. They have valved ears and noses to keep water out. The fur is warm and thick. Since they spend a significant amount of time in the water, their tracks aren't often found. The best places to look for tracks are muddy river banks. They have five toes on the front feet and five toes on the hind feet. Their toes are partially webbed, which helps them swim. Tracks in mud sometimes show this webbing. The claw marks are so close to the toes, they give the toes a characteristic pointed appearance. Otters are well-known for their intelligence and their playful antics. They are excellent fishers, but also will eat small mammals, fish, shellfish, snakes, turtles, birds, eggs, amphibians, and lampreys, a fish mistakenly called an "eel" which gave the Eel River its name. They feed primarily on amphibians and will range up to five miles up and down the river each day while hunting. The tail drag is sometimes visible in an otter trail. Often, their prints are found in groups of four. Otter scat commonly contains fish scales and is often found on prominent landmarks near water, including rocks, stumps, and boat docks. Otters roll on river banks and leave a musky scent. Dens are dug into banks, with underwater or above ground entrances. Nests are made inside the den out of leaves, sticks, and grass. Otters will often travel overland, far from water. They are active during daylight. Otters have two to three pups in late spring. Adult otters can weigh 30 pounds.

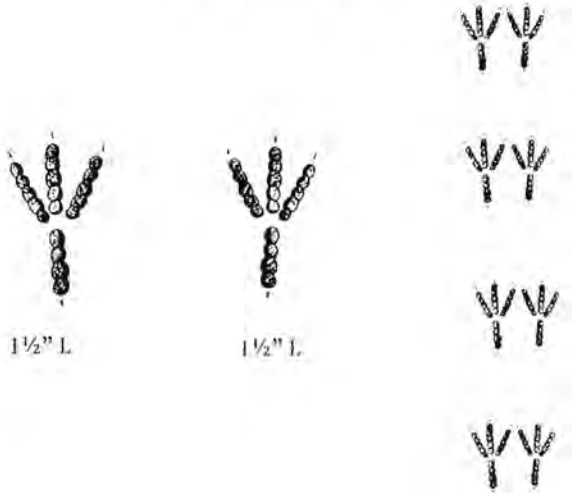


## Spotted Skunk




The spotted skunk, also known as the "hydrophobia cat" or the "civet cat," is the size of a small domestic cat, about half the size of a striped skunk. They are more social than other skunks. Several may share a den over the winter. They den in hollow logs, brush piles, and the burrows of other animals. The spotted skunk is the most carnivorous of all skunks. It eats small mammals, insects, rats, mice, grapes, fruit, corn, and grubs. Owls are the primary predator of skunks. Owls can strike silently from above and carry off a young skunk before the parent can use its defensive spray. Spotted skunks are good climbers and will climb trees to escape from predators. They are faster and more agile than striped skunks. In early spring, four to six blind, furred young are born. They don't have the distinctive black and white spotted fur coloration until early summer. The spotted skunk has a unique spraying behavior. When threatened, it will turn its back, do a handstand on its forefeet, raise its tail, and spray. It can accurately spray a predator 12 to 20 feet away. Most predators are wary and will back off when the skunk begins this display. Skunk scent comes from a chemical called methyl mercaptan and is carried in glands near the animal's tail. Spotted skunk tracks show five toes on each foot, with claw marks. The heel pad of the hind print is distinctively lobed. These skunks were hunted for their fine, silky pelts, which are very valuable. Spotted skunks have a home range of about 150 acres. They weigh one to two pounds and are about 1½ feet long from nose to tip of tail. They den in dry places, beneath buildings, in tree cavities, or in rock piles.

## Steller's Jay



1½" L

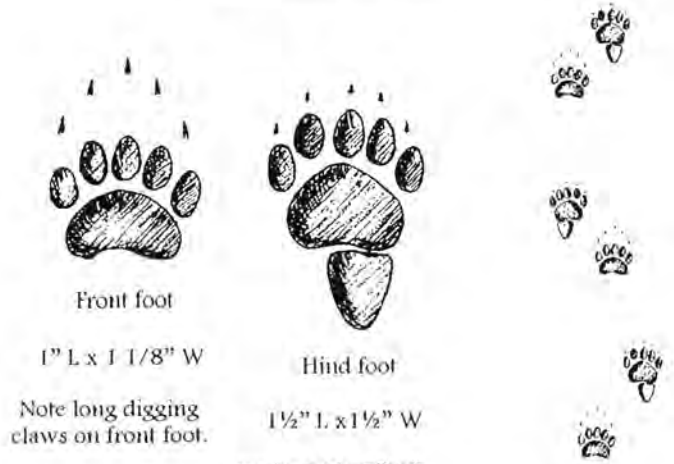
1½" L

Trail Pattern

A Steller's jay is a blue bird with a black crest and tufts of feathers on top of the head. This is the only California jay with a crest. They are common in campgrounds and have been called "camp robbers" because of their habit of stealing food from picnic tables. Although noisy and conspicuous in campgrounds, they are quiet when near their nest sites. They are very secretive about hiding their nests. Their tracks, which are smaller than those of the raven, show three toes facing forward and one toe facing backward. They eat many things, including the young of other birds, fruit, berries, seeds, insects, and human food. Steller's jays in the area are bold and will grab food right off a picnic table if you turn your back. Steller's jays can imitate the calls of the red-tailed hawk and the golden eagle. Jays will sit on fence posts or treetops to survey their surroundings. Because they spend much of their time in trees, the tracks you find on the ground will be paired.



## Striped Skunk



Front foot

1" L x 1 1/8" W

Note long digging claws on front foot.

Hind foot

1½" L x1½" W

Trail width: 7"-9"
Stride length: 5"-8"

Trail Pattern

The striped skunk is a boldly colored nocturnal animal whose defense is a very strong smelling spray. It has glands which hold about a tablespoon of musky smelling methyl mercaptan. This is enough to allow the skunk to spray five or six times. It stamps its feet, growls, hisses, turns its back, and raises its tail straight up when it is about to spray. It can spray up to 15 feet and the smell can carry a mile. If the spray gets in the eyes, it causes pain.

Skunk tracks show five toes on the front foot and five on the hind foot. The front tracks usually show claw marks farther ahead of the toe marks than the rear prints do. This is because the skunk has longer claws on the front feet to use in digging up roots and insects. They forage by digging. Sometimes, you will find these small holes dug out by skunks. They will also get into garbage cans. Skunks can be discouraged from visiting by scattering a few mothballs around on the ground. They are repelled by the smell of camphor.

Three to eight young are born blind and are weaned at six to seven weeks. Skunks are omnivorous, eating mice, eggs, insects, grubs, fruit, carrion, and shrews. Great horned owls are predators that commonly eat skunks. Skunks find shelter under buildings or in ground burrows taken over from other animals. Skunks are active year-round.

## Western Toad

Typical track pattern

Trail width: 2¾"

Toads are nocturnal amphibians who roam overland looking for insects. They are most active at night because the daytime heat would dry them out. During the day, they hide under logs, boards, rocks, burrows of their own construction, or in rodent burrows. They get around mostly by walking, rather than hopping like frogs do. They will hop to escape danger.

Tracks are often indistinct, unless they are found in soft mud. Usually the tips of the toes leave round dots and drag marks in the sand. The drag marks point in the direction of travel.

Western toads have dry, warty skin and a light stripe down the back. They often travel far from sources of water, although they do require water for breeding.

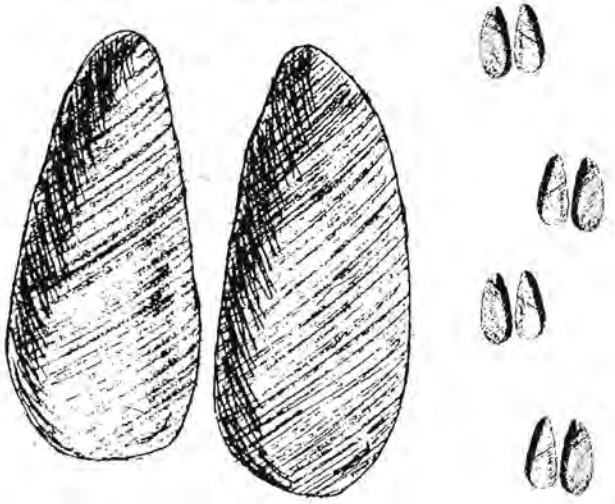
In the soft sand of river bars, the drag marks from the hind toes are very prominent.

They breed between January and September. Long strings of eggs in a jelly-like substance are attached to vegetation in still, shallow water. The tadpoles emerge from the eggs and live in the shallows feeding on vegetation until they lose their tails and metamorphose into toads.

If you handle toads or other amphibians, remember that insect repellents, sunscreens, and other substances on your hands can damage their delicate, sensitive skin. You will not get warts from toads.



## Wild Pig



4" L.

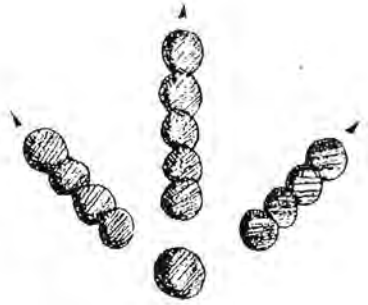
Trail Pattern

Wild pigs are not native animals in this area. The wild pigs in the region are descendants of domestic swine brought here by the original homesteaders. Over the years, some of these domestic animals escaped and went wild. Today, their descendants may be found in various locations in the region.

Pigs can grow to 300 pounds or more. They dig for roots and eat acorns and fallen fruit. They also eat nuts, grasses, fruit, small amphibians, eggs, small mammals, and carrion. In the spring, a litter of piglets is born to each sow. There can be a dozen in the litter. The adult males have tusks and can be aggressive. If you encounter a wild pig while hiking, keep your distance.

They are active dawn and dusk and are strong and agile. They move about in family groups and are strong swimmers and fast runners.

## Wild Turkey



4" L

Trail Pattern

Wild turkeys are native to the southeastern United States. They have been introduced in many parts of the west, including California. They prefer oak woodlands, but are found in grasslands and pine forests as well. They are swift runners and are wary of people. Turkeys are polygamous. The male struts with his tail fanned to attract a harem.

Where they naturally occur, wild turkeys were used by Native Americans as food. Some tribes refused to eat turkeys, believing that the birds were stupid and cowardly. The people feared that eating the birds would cause them to acquire some of these characteristics.

Turkeys lay eight to ten buff colored eggs with brown spots. Eggs are laid in a shallow depression in the ground, lined with grass and leaves. The typical call is a gobble.



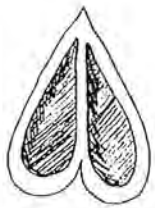
The following method of track identification is from notes taken during a class at Tom Brown's Tracking, Nature and Wilderness Survival School and from Tom Brown's Field Guide to Nature Observation Tracking. For a more complete description, please see this book (available at most libraries or bookstores).

## Overall Track Shapes

Use this method to identify unclear prints. Determine the overall shape of the print and the trail pattern. Then, use these two pages to identify the animal.

The tracks of the cat family are round in overall shape. Those of the dog family are egg-shaped. The deer family leaves heart-shaped impressions. The weasels leave groups of prints in a rectangular shape. Rabbits leave groups of prints that form a Y-shape. The tracks of raccoons, opossums and bears are very human-like in appearance. Many rodent feet are + shaped in overall outline.

Cat family



Deer family

Dog family

Rabbit family

Rodent family

Weasel family

Raccoons, opossums, bears

## Track Patterns
## (Gaits used when walking)

### Diagonal Walk

Dogs, cats, and hoofed animals.

### Gallop

Rabbits, hares, and rodents (except beaver, muskrat, marmot, porcupine).

### Bound

Members of the weasel family (otters, weasels).

### Pace

Bear, raccoon, opossum, skunk, porcupine, wolverine, badger, beaver, muskrat, marmot.



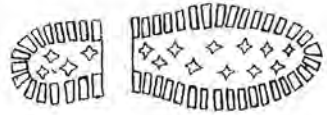
## You're on your own

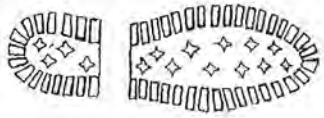
Now that you've learned the basics, it's time to go tracking. You know what to look for and where to look for it. Tracking is a skill that must be learned by doing it. A book can get you started and show you the basics, but you have to practice on your own. The last page lists recommended books on tracking. Most of the information for this book came from these sources. They are highly recommended reading if you are interested in learning more about tracks and tracking.

## Dirt Time

As with any other skill, the importance of practice cannot be overemphasized. To a tracker, practice is known as "dirt time," the time spent looking at tracks in the dirt. The way to learn to see the tiny, intricate details of tracks is to look at lots and lots of tracks. After looking at thousands of tracks, you will develop an "eye" for them. You will find yourself eagerly examining every patch of clear ground you come across. You will begin to notice tracks in places you once thought it was impossible to see them. It takes time and patience and practice to get to this level of skill, but the rewards are well worth the time spent.

Tracking will open new worlds to you. You will notice many things that you used to pass by. Suddenly, the world will become a different place, full of fantastic stories, rewritten each day for you to read. Good luck and happy trails.





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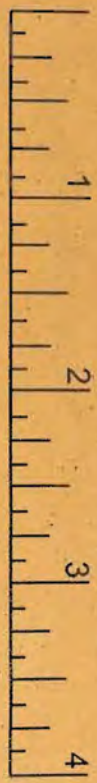

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# Animal Tracks of the Redwood Region

Exploring the Secret Lives of Animals

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